

Date: Wednesday, 12/13/2006 2:48:22 PM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: DOUBLER
Job Number	: 29943		
Estimate Number	: 11318		
P.O. Number	: N/A	Part Number	: D33023
This Issue	: 12/13/2006 S.O. No. : N/A	Drawing Number	: D3302 REV B2
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A Type : MACHINED PARTS	Drawing Revision	: B2
Previous Run	: 28231	Material	: N/A
Written By	: <u>[Signature]</u>	Due Date	: 1/5/2007
Checked & Approved By	: <u>[Signature] 061214</u>	Qty:	10 Um: Each
Comment	: Est A 04.09.02 New issue KJ/JLM Est B 06.05.02 Water jet EC		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M6061T6S063	6061-T6 .063 Sheet
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Comment: Qty.: 1.0428 sf(s)/Unit Total : 10.4276 sf(s)  
 6061-T6 .063 Sheet  
 Material: 6061-T6 (QQ-A-250/11) 0.063" thick  
 (M6061T6S.063)  
 Identify for D3302-3  
 Batch: M100285

SAD 06:07:01:02

2.0	WATER JET	FLOW WATER JET
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Comment: FLOW WATER JET  
 1-Cut as per Dwg D3302  
 Dwg Rev: B2  
 Prog Rev: B

SAD 07:01:02

2-Deburr if necessary

SAD 07:01:05

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SAD 07:01:02

4.0	QC8	SECOND CHECK
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Comment: SECOND CHECK


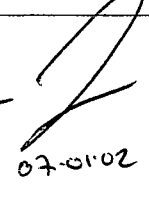

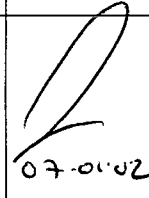
07:01:02 (10)

PTD

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: ☒ Date: 07/01/02

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07-01-02	02 2.0	1 part was damaged by blow out on the waterjet. The tip was run across the material.	 07-01-02	destroyed: replace	SAD 07-01-02	 07-01-02	 07-01-02	 07-01-02

NOTE: Date & initial all entries

Date: - Wednesday, 12/13/2006 2:48:22 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOUBLER

Job Number: 29943

Part Number: D33023

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Deburr break all unmarked sharp edges 0.005 to 0.010

SAB 07:01:06 (10)

6.0

BRAKE NC

NC BRAKE



Comment: NC BRAKE

Form as per Dwg D3302

SAB 07/01/23 10

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/01/24 (13)

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

FR/ 98 07/01/25 (10)

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

07/01/25

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 31380

07/01/25 (10)

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/01/26 (10)

Job Completion



07/01/26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order:	29943
Description: Doubler		Part Number:	D3302-3
Inspection Dwg: D3302	Rev: B2 ✓	Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
14.452 ✓	+/-0.010	14.450	✓		measuring tape Vern	
12.75 ✓	+/-0.030	12.75	✓		measuring tape	
0.851 ✓	+/-0.010	0.853	✓		vertical Vern	
0.851 ✓	+/-0.010	0.851	✓		vertical Vern	
8.952 <del>8.997</del>	+/-0.010	8.959	✓		Vern	
<del>7.30</del>	<del>+/-0.030</del>	<del>7.27</del>	<del>✓</del>		<del>measuring tape</del>	
<del>5.000</del>	<del>+/-0.005</del>					
<del>1.000 pitch</del>	<del>+/-0.005</del>					
R0.12 ✓	+/-0.030	R0.12	✓		R-L	
<del>1.031</del>	<del>+/-0.010</del>					
<del>2.021</del>	<del>+/-0.010</del>					
<del>1.101</del>	<del>+/-0.010</del>					
<del>11.250</del>	<del>+/-0.005</del>					
<del>1.125 pitch</del>	<del>+/-0.005</del>					
<del>1.476</del>	<del>+/-0.010</del>					
7.101 <del>7.250</del>	+/-0.010	7.25	✓		Vern	
<del>0.063</del>	<del>+/-0.010</del>					
<del>00.098</del>	<del>+0.005/-0.000</del>					

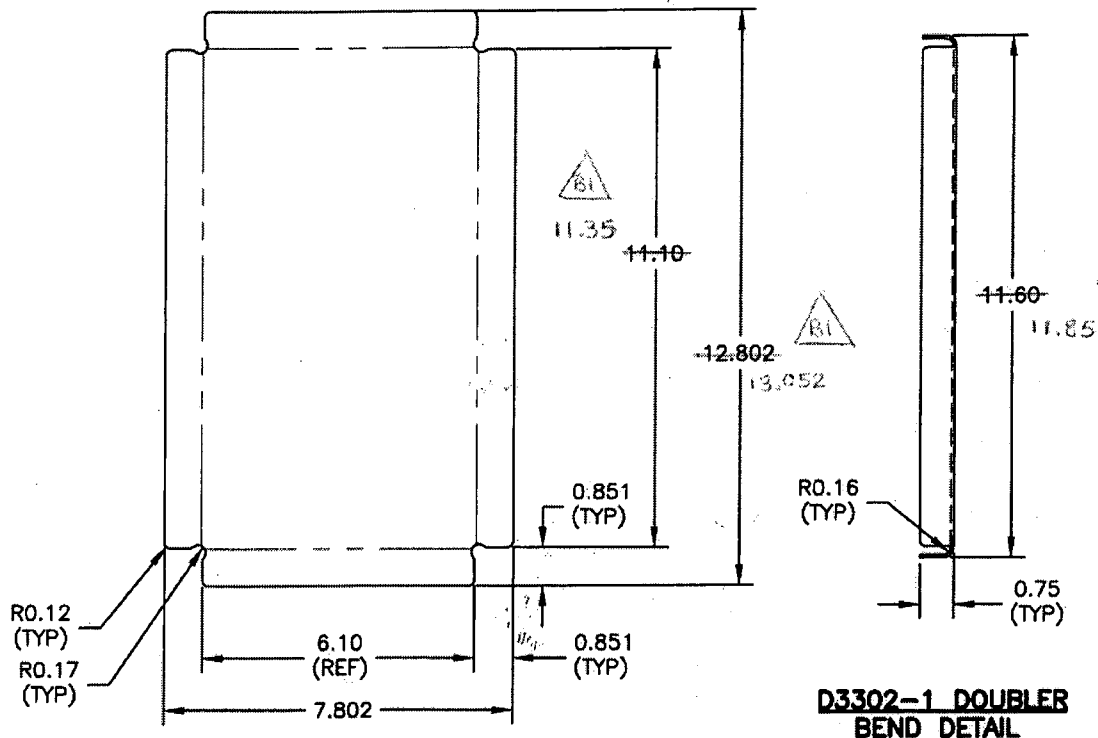
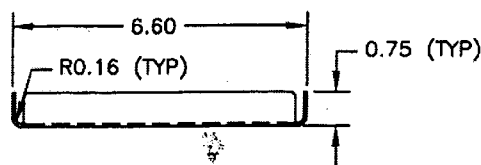
Measured by: SAD	Audited by: [Signature]	Prototype Approval:	N/A
Date: 07.01.02	Date: 07.01.02	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.09.03	New Issue	KJ/JLM	
B	06.03.09	Dwg Rev update; Dimensions revised to revision B2	KJ/JLM	[Signature]

[Signature]

**DART**

DESIGN #	DRAWN BY #	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3302	REV. B SHEET 1 OF 4
DATE 04.11.18		TITLE DOUBLER	SCALE 1:4
A	04.07.06	NEW ISSUE	
B	04.11.18	REMOVE HOLES	
B1	04.12.15	ADDED 0.25" TO THE LENGTH FOR -1/-3	
B2	05.03.21	7.25 WAS 7.34; 8.95 WAS 9.042; 7.75 WAS 7.84 FOR D3302-3	

RELEASED  
04.11.23**D3302-1 FLAT PATTERN****D3302-1 NOTES:**

- 1) MATERIAL: 6061-T6 (QQ-A-250/11) 0.063 THICK (REF. DART SPEC. M6061T6S-063)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) IDENTIFY WITH DART P/N & B/N USING FINE POINT PERMANENT MARKER

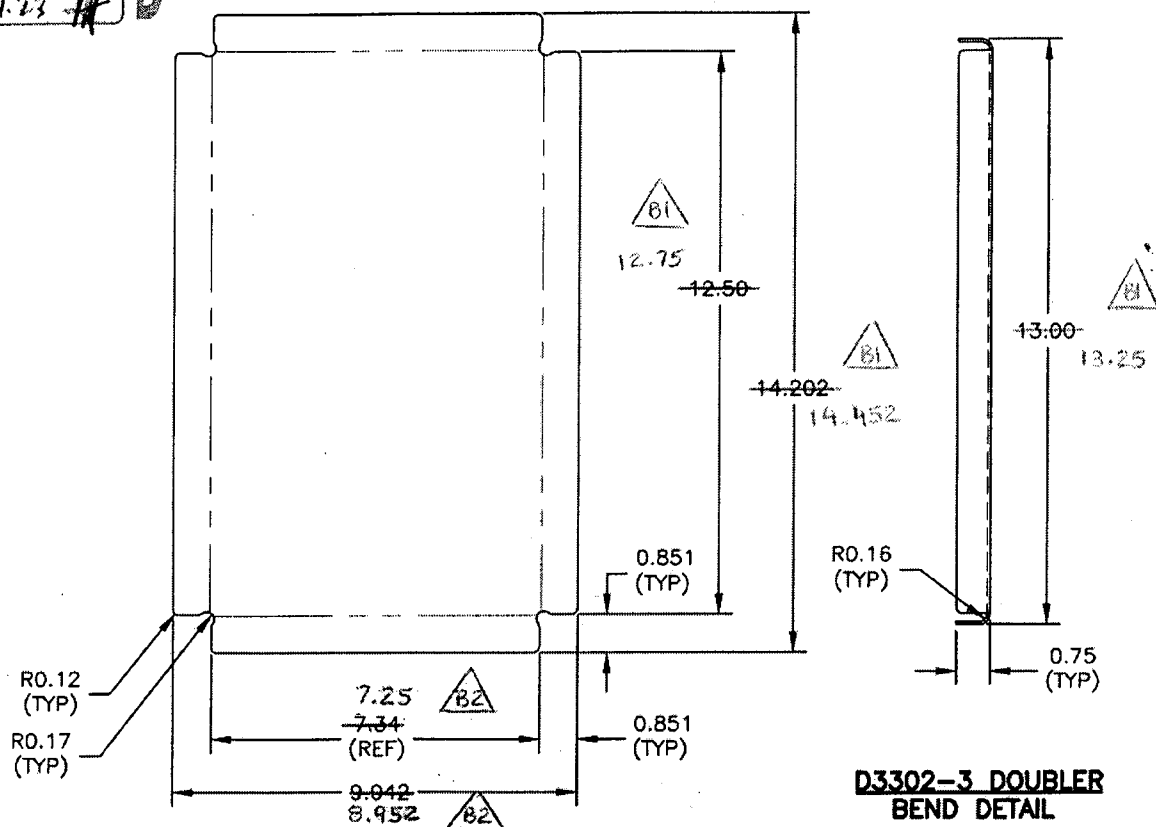
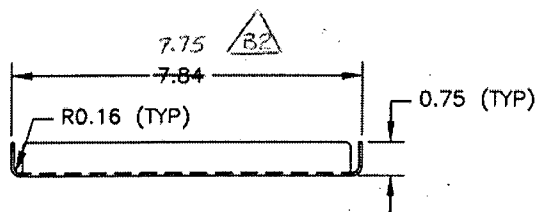
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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3302	REV. B SHEET 2 OF 4
DATE 04.11.18		TITLE DOUBLER	SCALE 1:4

**RELEASED**  
04.11.23 *[Signature]***D3302-3 FLAT PATTERN****D3302-3 NOTES:**

- 1) MATERIAL: 6061-T6 (QQ-A-250/11) 0.063 THICK (REF. DART SPEC. M6061T6S.063)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) IDENTIFY WITH DART P/N & BATCH USING FINE POINT PERMANENT MARKER

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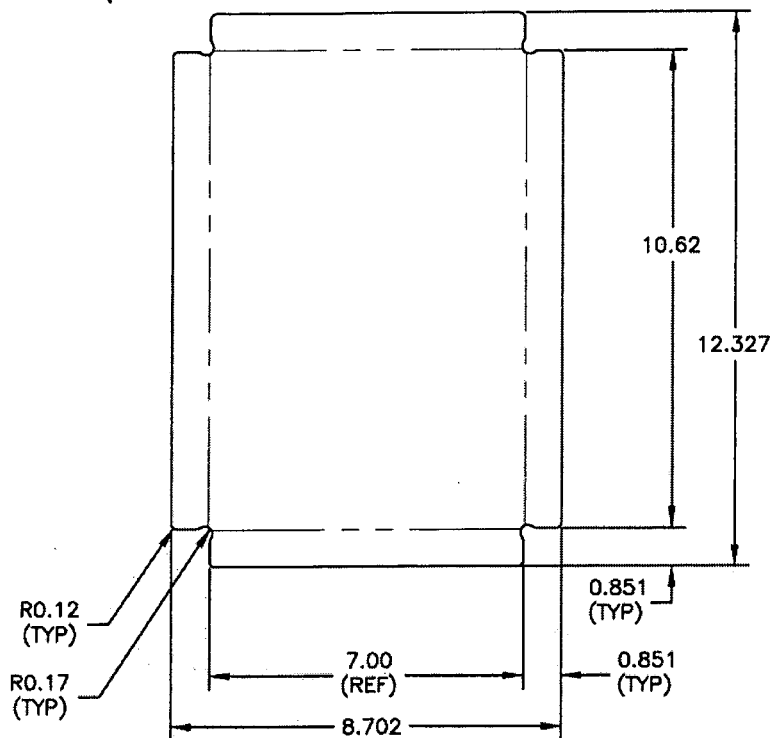
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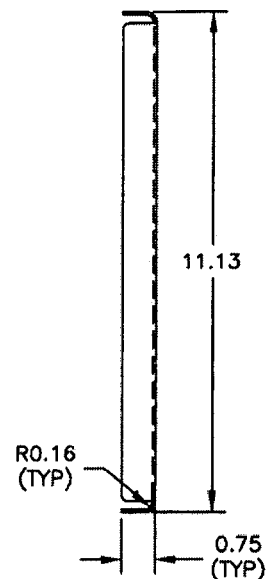


DESIGN FF	DRAWN BY FF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D3302	REV. B SHEET 3 OF 4
DATE 04.11.08		TITLE DOUBLER	SCALE 1:4

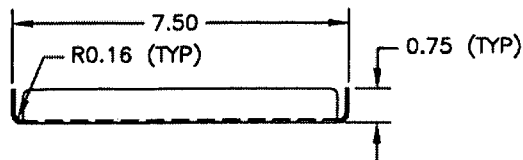
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04.11.23 H



**D3302-5 FLAT PATTERN**



**D3302-5 DOUBLER  
BEND DETAIL**



**D3302-5 NOTES:**

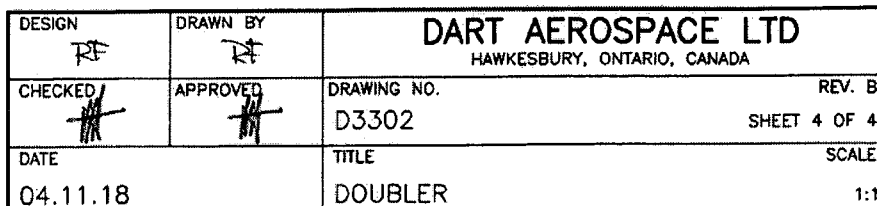
- 1) MATERIAL: 6061-T6 (QQ-A-250/11) 0.063 THICK (REF. DART SPEC. M6061T6S.063)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) IDENTIFY WITH DART P/N & B/N USING FINE POINT PERMANENT MARKER

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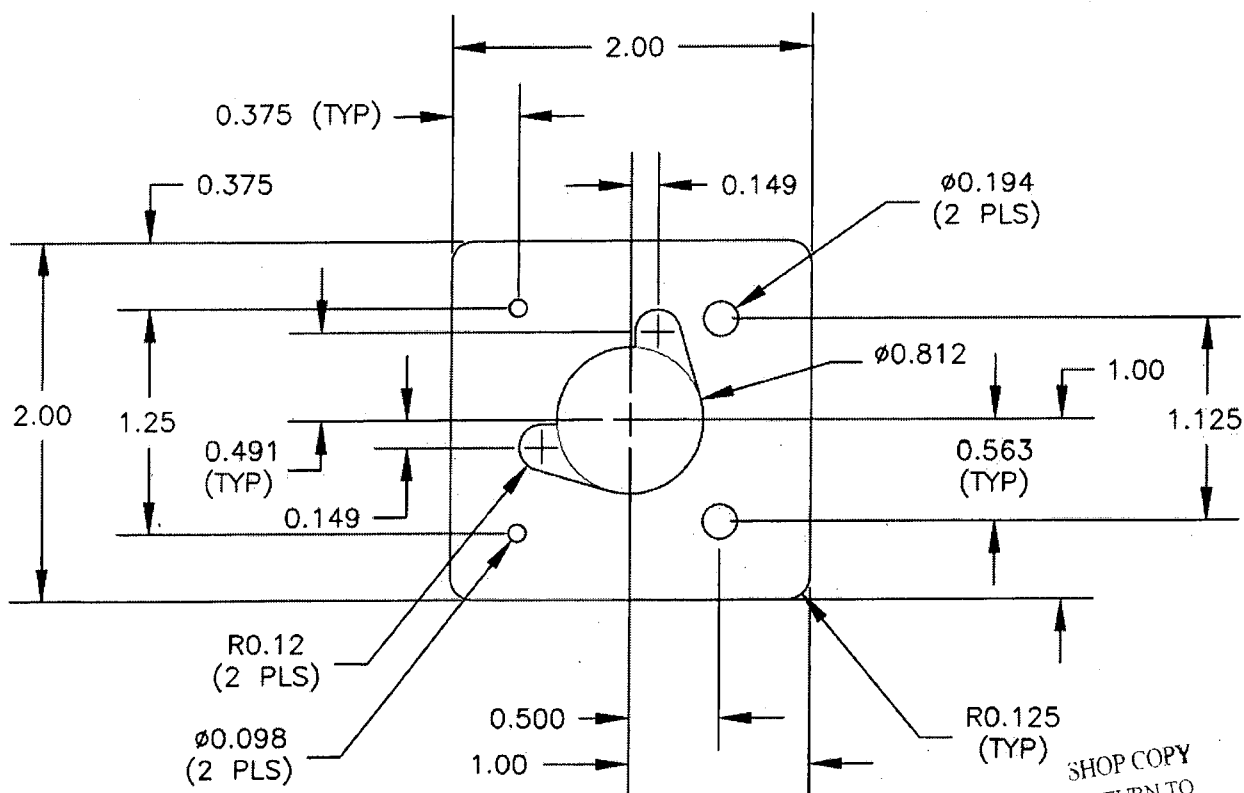
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04.11.23



D3302-7

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NO. 29943

## D3302-7 NOTES:

- 1) MATERIAL: 5052-H32 OR 6061-T6 (QQ-A-250/8 OR QQ-A-250/11)  
0.040 THICK (REF. DART SPEC. M5052H32S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) IDENTIFY WITH DART P/N & B/N USING FINE POINT PERMANENT MARKER

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